

Appendix E

Alignment of tobamovirus coat protein sequences

1

<u>TMV-OM</u>	SYSITTPSQFVFLSSAWADPIELINLCTNALGNQFQTQQARTVVQRQFSE
<u>S34858</u>	SYSITTPSQFVFLSSAWADPIELINLCTNALGNQFQTQQARTVVQRQFSE
<u>S34857</u>	SYSITTPSQFVFLSSAWADPIELINLCINALGNQFQTQQARTVVQRQFSE
<u>S34856</u>	SYSITTPSQFVFLSSAWADPIELINLCINALGNQFQTQQARTVVQRQFSE
<u>TMV-ER</u>	SYNITTPSQFVFLSSAWADPLELINLCTNALGNQFQTQQARTVVQRQFSE
<u>TMV-06</u>	SYSITTPSHFVFLSSAWADPIELINLCTNALGNQFQTQQARTVVQRQFSE
<u>TMV-vul</u>	SYSITTPSQFVFLSSAWADPIELINLCTNALGNQFQTQQARTVVQRQFSE
<u>TMV-DA</u>	SYSITSPSQFVFLSSWADPIELLNVCCTSSLGNQFQTQQARTTVQQQFSE
<u>ToMV-L</u>	SYSITSPSQFVFLSSWADPIELLNVCCTNSILGNQFQTQQARTTVQQQFSE
<u>ToMV-Kr</u>	SYTVSSANQLVYLGSVWADPLELQNLCTSALGNQFQTQQARTTVQQQFSD
<u>TMGMV</u>	PYTINSPSQFVYLGSSAYADPVQLINLCTNALGNQFQTQQARTTVQQQFAD
<u>TMV-OB</u>	PYTVTSPSQLVYFGSVWADPITFIDLCTVALGNQFQTQNARTTVQQQFSD
<u>PMMV</u>	AYTVSSANQLVYLGSVWADPLELQNLCTSALGNQFQTQQARTTVQQQFSD
<u>PkMMV</u>	PYTVPSSPNQLVYFGSVWADPIALIDLCTVSLGNQFQTQNARTTVQQQFSD
<u>ORSV</u>	SYTITDPSKLAYLSSAWADPNSLINVLCNTNSILGNQFQTQQARTTVQQQFAD
<u>ORSV-F</u>	SYTITDPSKLAYLSSAWADPNSLINVLCNTNSILGNQFQTQQARTTVQQQFAD
<u>CR-TMV</u>	SYNITNPNQYQYFAAVWAEPIMPLNQCISALSQSYQTQAARDTVRQQFSN
<u>TVCV</u>	SYNITNPNQYQYFAAVWAEPIMLNQCMSALSQSYQTQAARDTVRQQFSN
<u>RMV</u>	SYNITNSNQYQYFAAVWAEPPTPMLNQCVSALSQSYQTQAGRDTVRQQFAN
<u>HRMV.GER</u>	SYNITNSNQYQYFAAVWAEPPTPMLNQCVSALSQSYQTQAGRDTVRQQFAN
<u>HRMV.JAP</u>	SYNITNSNQYQYFAAVWAEPPTPMLNQCVSALSQSYQTQAGRDTVRQQFAN
<u>WASABI</u>	SYNITNSNQYQYFAAVWAEPPTPMLNQCVSALSQSYQTQAGRDTVRQQFAN
<u>TMV-CG</u>	SYNITSSNQYQYFAAMWAEPTAMLNQCVSALSQSYQTQAGRDTVRQQFSN
<u>CRMV</u>	VYNITSSNQYQYFAAMWAEPTAMLNQCVSALSQSYQTQAGRDTVRQQFSN
<u>RMV-SH</u>	VYNITSSNQYQYFAAMWAEPTAMLNQCVSALSQSYQTQAGRDTVRQQFSN
<u>RMV-SH</u>	SYNITSSNQYQYFAAMWAEPTAMLNQCVSALSQSYQTQAGRDTVRQQFSN
<u>RMV-CAB</u>	SYNITSSNQYQYFAAMWAEPTAMLNQCVSALSQSYQTQAGRDTVRQQFSN
<u>CGMMV</u>	AYNPITPSKLIAFSASYVPVRTLLNFLVASQGTAQGRDSFRESLSA
<u>CGMMV-W</u>	AYNPITPSKLIAFSASYVPVRTLLNFLVASQGTAQGRDSFRESLSA
<u>C-CGMMV</u>	SYSTSGIRSLPAFAKSFYPFYDVYNNLVSAQGGALQTQNGKDILRESLTG
<u>CFMMV</u>	SYSTSGRLSLPAYTKSFCPYYALYDLLVSAQGGALQTQNGKDILRDSING
<u>YCGMMV</u>	SYSISSFRSLPAYTKSFYPFIEFYNNLVSSQGGALQTQNGKDISRSLNG
<u>KGMMV</u>	SYSTSGIRSLPAFAKSFYPFYDVYNNLVSAQGGALQTQNGKDILRESLTG
<u>ZGMMV</u>	PYSTSGIRSLPAFSKSFPPYLELYNLLTNQGAALQTQNGKDILRESLVG
<u>SHMV</u>	AYSIPTPSQLVYFTENYADYIPFVNRLINARSNSFQTQSGRDELREILIK

50

<u>TMV-OM</u>	VWKPSPQVTVRFPD-SD-FKVYRYNAVLDPVTALLGAFDTRNRIIEVEN
<u>S34858</u>	VWKPSPQVTVRFPD-SD-FKVYRYNAVLDSLVTALLGAFDTRNRIIDVEN
<u>S34857</u>	VWKPSPQVTVRFPD-SD-FKVYRYNAVLDPVTALLGAFDTRNRIIDVEN
<u>S34856</u>	VWKPSPQVTVRFPD-SD-FKVYRYNAVLDPVTALLGAFDTRNRIIDVEN
<u>TMV-ER</u>	VWKPSPQVTVRFPD-RD-FKVYRYNAVLDPVTALLGAFDTRNRIIEVEN
<u>TMV-06</u>	VWKPSPQVTVRFPD-RD-FKVYRYNAVLDPVTALLGAFDTRNRIIEVEN
<u>TMV</u>	VWKPSPQVTVRFPD-SD-FKVYRYNAVLDPVTALLGAFDTRNRIIEVEN
<u>TMV-DA</u>	VWKPFPQSTVRFPG-DV-YKVYRYNAVLDPPLITALLGTFDTRNRIIEVEN
<u>TOMV-L</u>	VWKPFPQSTVRFPG-DV-YKVYRYNAVLDPPLITALLGAFDTRNRIIEVEN
<u>TOMV-KR</u>	VWKTIPTATVRFP-A-TG-FKVFYRYNAVLDSLVSALLGAFDTRNRIIEVEN
<u>TMGMV</u>	AWKPVPSMTVRFP-A-SD-FYVYRYNSTLDPLITALLNSFDTRNRIIEVDN
<u>TMV-OB</u>	LFKTVPTRTNRFNDGENFRVFRYNSTLDPLISALMNSFDTRNRIIEVDN
<u>PMMV</u>	VWKTIPTATVRFP-A-TG-FKVFYRYNAVLDSLVSALLGAFDTRNRIIEVEN
<u>PKMMV</u>	LFKTVPTRTIRFSDGENFRVFRYNSTLDPLITALLNSFDTRNRIIETEN
<u>ORSV</u>	VWQPVPTLTSRFPAGAGYFRVYRYDPILDPLITFLMGTFDTRNRIIEVEN
<u>ORSV-F</u>	VWQPVPTLASRFPAGAGYFRDYRYDPILDPLITFLMGTFDTRNRIIEVEN
<u>CR-TMV</u>	LLSAVVAPSQRFP-E-TG-SRVYVNSAVIKPLYEALMKSFDTRNRIIETEE
<u>TVCV</u>	LLSAVVTPSQRFPD-TG-SRVYVNSAVIKPLYEALMKSFDTRNRIIETEE

AAB08579	LLSTIVAPNQRFPD-TG-FRVYVNSAVIKPLYEALMKSFDTRNRIIETEE
HRMV.GER	LLSTIVAPNQRFPD-TG-FRVYVNSAVIKPLYEALMKSFDTRNRIIQTEE
HRMV.JAP	LLSTIVAPNQRFPD-TG-FRVYVNSAVIKPLYEALMKSFDTRNRIIETEE
WASABI	LLSAIVTPNQRFPE-TG-YRVYVNSAVLKPLYEALMKSFDTRNRIIETEE
TMV-CG	LLSAIVTPNQRFPD-TG-YRVFINSAVLKPLYESLMKSFDTRNRIIETEE
CRMV	LLSAIVTPNQRFPE-AG-YRVYINSAVLKPLYESLMKSFDTRNRIIETEE
RMV-SH	LLSAIVTPNQRFPE-TG-YRVYINSAVLKPLYESLMKSFDTRNRIIETEE
AAD56047	LLSAIVTPNQRFPE-TG-YRMYINSAVLKPLYESLMKSFDTRNRIIETEE
AAD20292	LLSAIVTPNQRFPE-SG-YRVYINSAVLKPLYEALMKSFDTRNRIIETEE
CGMMV	LPSSVVDINSRFPD-AG-FYAFLNGPVLRP1FVSLLSSTDTRNRVIEVVD
CGMMV-W	LPSSVVDINSRFPD-AG-FYAFLNGPVLRP1FVSLLSSTDTRNRVIEVVD
C-CGMMV	LLT5VASLNSRFPA-NE-FFVWSRESRIAIIIDSLLSALDSRNRAIEVEN
CFMMV	LLTVASPRSRFPA-EG-FFVWSRESRIAIIIDSLLSALDSRNRAIEVEN
YCGMMV	LLT5VASPKSRFPA-GE-AFVWSRESRIAIIIDSLLSALDSRNRAIEVEN
KGMV	LLT5VASLNSRFPA-NE-FFVWSRESRIAIIIDSLLSALDSRNRAIEVEN
ZGMV	LLSSVASPTSQFPS-GV-FYVWSRESRIAALIDS LGALDSRNRAIEVEN
SHMV	SQSVVSPISRFPAEPA-YYIYL RDPSISTVYTALLQSTDTRNRVIEVEN

100

TMV-OM	QANPTTAETLDATRRVDDATVAIRSAINNLVVELIRGTGSYNRSSFESSS
S34858	QANPTTAETLDATRRVDDATVAIRSAINNLIVEIRGTRSYNRSSFESSY
S34857	QANPTTAETLDATRRVDDATVAIRSAINNLIVEIRGTRSYNRSSFESSS
S34856	QANPMTAETLDATRRVDDATVAIRSAINNLIVEIRGTRSYNRSSFESSS
TMV-ER	QANPTTAETLDATRRVDDATVAIRSAINNLIVEIRGTRSYNRSSFESSS
TMV-06	QANPTTAETLDATRRVDDATVAIRSAINNLVELIRGTGSYNRSSFESSS
TMV	QANPTTAETLDATRRVDDATVAIRSAINNLIVEIRGTRSYNRSSFESSS
TMV-DA	QQSPTTAETLDATRRVDDATVAIRSAINNLVNELVRGTGLYNQNTFESMS
TOMV-L	QQSPTTAETLDATRRVDDATVAIRSAINNLVNELVRGTGLYNQNTFESMS
TOMV-KR	PQNPTTAETLDATRRVDDATVAIRASISNLMNELVRGTGMYNQALFESAS
TMGMV	QPAPNTTEIVNATQRVDDATVAIRASINNLANELVRGTGMFNQAGFETAS
TMV-OB	PANPNTSEVASATQRVDDATVNIRACINNLMNELVRGTGMMNTASFETVS
PMMV	PQNPTTAETLDATRRVDDATVAIRASISNLMNELVRGTGMYNQALFESAS
PKMMV	PANPNTAEIASATQRVDDATVSIRACINNLMNELARGTGMLNTVSFETIS
ORSV	PQNPTTETLDATRRVDDATVAIRSAINNLNELVRGTGMYNQVSFETIS
ORSV-F	PQNPTTETLDATRRVDDATVAIRSAINNLNELVRGTGMYNQVSFETMS
CR-TMV	ESRPSASEVRNATQRVDDATVSIRSQIQLLSELSSGHGYMNRAEFEAL-
TCV	ESRPSASEEVANATQRVDDATVAIRSQIQLLSELNSNGHGYMNRAEFEAL-
AAB0857	9 ESRPSASEEVANATQRVDDATVAIRSQIQLLNLELSNGHGYMNRAEFEAI-
HRMV.GER	QSRPSASQVANATQRVDDATVAIRSQIQLLNLELSNGHGYMNRAEFEAI-
HRMV.JAP	ESRPSASQVADATQRVDDATVAIRSQIQLLNLELSNGHGYMDRAQFEAI-
WASABI	ESRPSASEEVANATQRVDDATVAIRSQIQLLSELSSGHGLMNRAEFEVL-
TMV-CG	ESRPSASEEVANATQRVDDATVAIRSQIQLLNLELSNGHGLMNRAEFEVL-
CRMV	ESRPSASEEVANATQRVDDATVAIRSQIQLLNLELSNGHGLMNRAEFEVL-
RMV-SH	ESRPSASEEVANATQRVDDATVAIRSQIQLLNLELSNGHGLMNRAEFEVL-
AAD56047	ESRPSASEEVANATQRVDDATVAIRSQIQLLNLELSNGHGLMNRAEFEVL-
AAD20292	ESRPSASEEVANATQRVDDATVAIRSQIQLLNLELSNGHGLMNRAEFEVL-
CGMMV	PSNPTTAESLNKRTDDASTAARAEIDNLIESISKGFDVYDRASFEAAF
CGMMV-W	PSNPTTAESLNKRTDDASTAARAEIDNLIESISKGFDVYDRASFEAAF
C-CGMMV	PSNPSTGEALNATKRNDDASTAAHNDIPLLLAALNDGVGVFDSASFESAF
CFMMV	PSNPSTSEALNATKRNDDASTAAHNDIPQLISALNDGAGVFDRASFESQF
YCGMMV	PSNPSTGEALNATKRNDDASTAAHNDIPLLLAALNDGVGVFDTASFESAF
KGMV	PSNPSTGEALNATKRNDDASTAAHNDIPQILSALNEGAGVFDRASFESAF
ZGMV	PSNPSTGEALNNAVKRNDLASTAAHNDIPQILSALNEGAGVFDRASFESAF
SHMV	STNVTTAEQLNAVRRTDDASTAIHNNLEQLLSSLNTGTVFNRTSFESAS

150

TMV-OM	GLVWNSGPA
S34858	GLVWTSGPA
S34857	GLVWTSGPA
S34856	GLVWTSGPA

TMV-ER	GLVWTSGPA
TMV-06	GLVWTSGPA
TMV	GLVWTSGPA
TMV-DA	GLVWTSAPA
TOMV-L	GLVWTSAPA
TOMV-KR	GLTWATTP?
TMGMV	GLVWTTTPA
TMV-OB	NLTWTTTT
PMMV	GLTWATTP?
PKMMV	NLTWTTAAT
ORSV	GLTWTSS??
ORSV-F	GLTWTSS??
CR-TMV	-VPWTTAAA
TVCV	-LPWTTAPA
AAB0857	-LPWTTAPA
HRMV.GER	-LPWTTAPA
HRMV.JAP	-LPWTTAPA
WASABI	-IPWATAPA
TMV-CG	-LPWTTAPA
CRMV	-LPWATAPA
RMV-SH	-LPWATAPA
AAD56047	-LPWATAPA
AAD20292	-LPWTTAPA
CGMMV	SVVWSEATT
CGMMV-W	SVVWSEATT
C-CGMMV	GLTWTASAT
CFMMV	GLVWTAASS
YCGMMV	GLTWTASSS
KGMV	GLTWTASAT
ZGMV	GLVWTAGSS
SHMV	GLTWLVTAA

[Return to Home Page](#)

Last Updated: Thu., May 31, 2001